temnospondylous groups and the holospondylous group. In the first group he would place all the forms which possess rhachitomous, embolomerous and stereospondylous vertebræ, and in the second group the forms which are usually known as Aistopoda and Microsauria. He evidently excludes the Branchiosauria from the Stegocephala proper, in which the present writer heartily agrees.

The contribution is a distinct advance in the knowledge of the forms described and it is to be hoped that we may have more information on the European forms which have been only too little studied and described.

The Cotylosauria.—The anatomy of this peculiar group of reptiles has been further elucidated by the recent studies of Williston[1] and Broili.[2] Williston restudied the form first described by Cope under the name of *Parioticus incisivus*. The University of Chicago possesses a nearly complete skeleton of this form and from his studies of this specimen Williston reached the conclusion that the form belongs rather in the genus Labidosaurus and is a typical cotylosaurian. He has given detailed figures of the anatomy of the various portions of the skeleton and a restoration of the form in so far as it is known. Broili has also given a restoration of a species of Labidosaurus, *L. hamatus*. He has mounted the entire skeleton free. This was impossible in the case of the specimen studied by Williston. Broili's restoration is a welcome addition to the knowledge of the Cotylosauria, although I am sure the animal, were he alive, would prefer not to have such an awkward sway in his vertebral column. One of the peculiar things about the Cotylosauria is the absence of lateral line canals which might be expected to be present from the close resemblance in their organization to the Stereospondyli, in which these canals are well developed. Dr. Williston searched carefully for the canals, but without success. The presence or absence of the canals may, at some future time, be one of the chief distinguishing characters between the forms which we call reptilian and those we call amphibian.

As a postscript to his article on Lysorophus[3] Williston has figured and described the ventral ribs of *Labidosaurus incisivus*.

[1] *Journ. Geol.*, Vol. XVI, No. 2, 1908.

[2] *Zeit. Deutsch. geol. Gesell.*, Bd. 60, H. 1, 1908.

[3] *Biol. Bull.*, Vol. XV, No. 5, 1908.

From the presence of these small abdominal ribs Williston concludes that: "This character adds another evidence of the relationship between the Procolophonia and Labidosaurus, and destroys its value as a group distinction." Broili, on the other hand, sees closer relationship between the Cotylosauria and the Stegocephala.

The Oldest Known Reptile.[1]—Dr. S. W. Williston has recently redescribed the type specimen of the oldest known reptile. This form, which Williston proposes to call *Isodectes copei* sp. nov., was doubtfully referred by Cope to the genus Tuditanus, but subsequently he referred it to the Texas genus Isodectes. It certainly does not belong in Tuditanus, and while there is no positive evidence that the form belongs in the genus Isodectes it seems well to leave it there until the characters of Isodectes are better known. The specimen is No. 4457 of the U. S. National Museum. It is preserved in a block of soft coal from the Linton mines of Ohio which have furnished nearly all of the remains of Carboniferous quadrupeds yet known in North America. The Linton mines were undoubtedly located well down in the Pennsylvanian and there has not yet been described a reptile from a lower horizon. The affinities of the form are doubtful though its close relationship to the Microsauria is well established. The intercentral attachment of the ribs and the apparent loss of the hypocentra in *Isodectes copei*, may require a revision of the theory of the formation of the reptilian vertebræ. The absence of abdominal ribs in this form is significant in the light of the recent discussions of the relationships of the early reptiles.

The Age of the Gaskohle.—Students of vertebrates the world over have become accustomed to accepting Fritsch's interpretation of the age of the Gaskohle of Bohemia as Permian. It is with some surprise, though not a little gratification, to note that through the recent studies of European geologists and paleontologists the deposits in Bohemia are now being regarded as Upper Carboniferous. The facts and arguments are well set forth by Broili[1] in a recent discussion on Sclerocephalus. Besides thus adding to the stratification of the forms of Amphibia the new fact is thus brought out that the large form Sclero-

[1] *Journ. Geol.*, Vol. XVI, No. 5.

[1] *Jahrbuch d. K. K. Geol. Reichsan.*, Bd. LVIII, H. I.